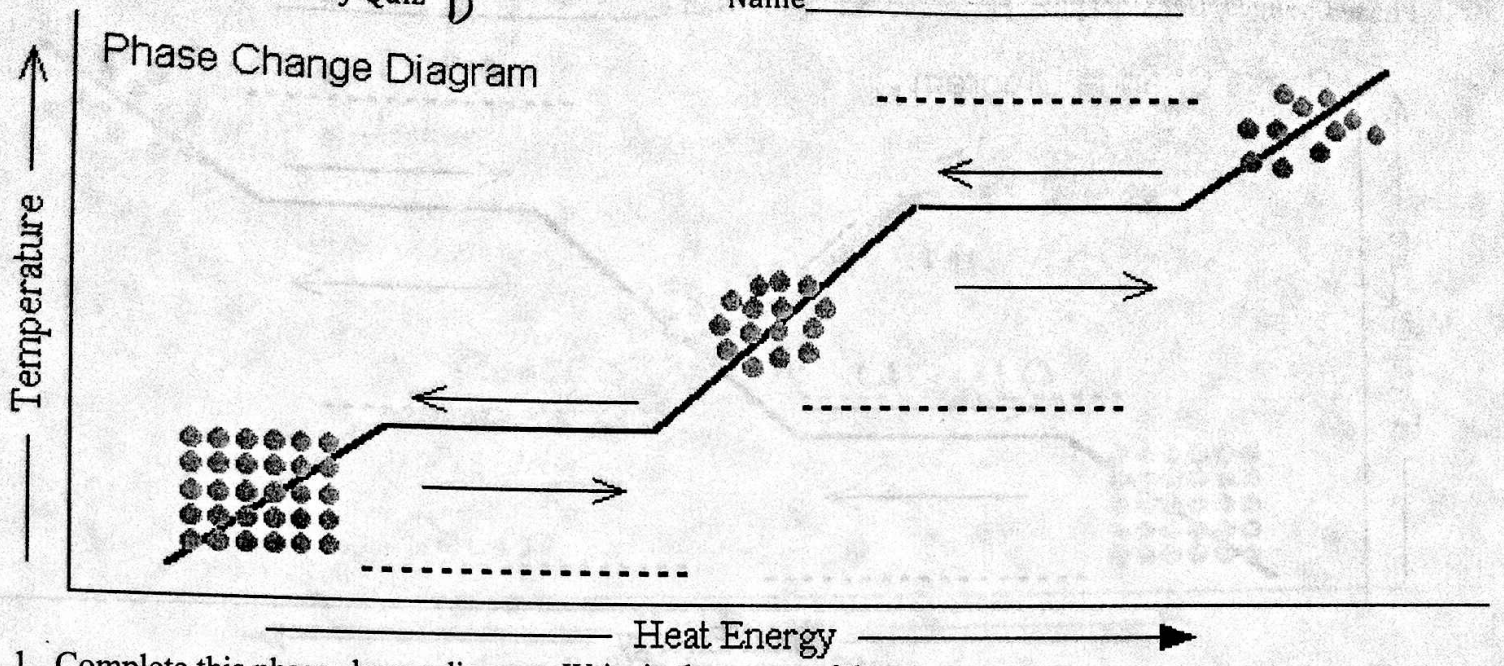
Phase Changes/Density Quiz B

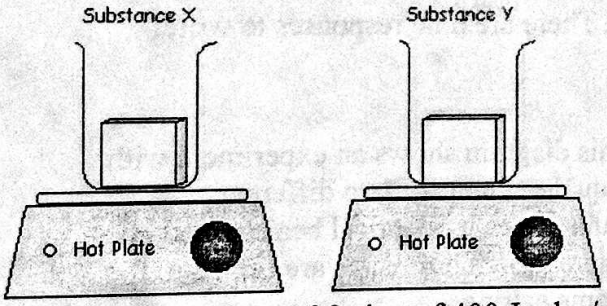
Name_____



1. Complete this phase change diagram. Write in the names of the:
   (3) phases (---------- lines)
   (4) phase change processes (the small arrows)
   Color the line PURPLE where the potential energy is changing
   Color the line GREEN where the kinetic energy is changing

2. T / F You can't change both the temperature and state of a material at the same time.

3.

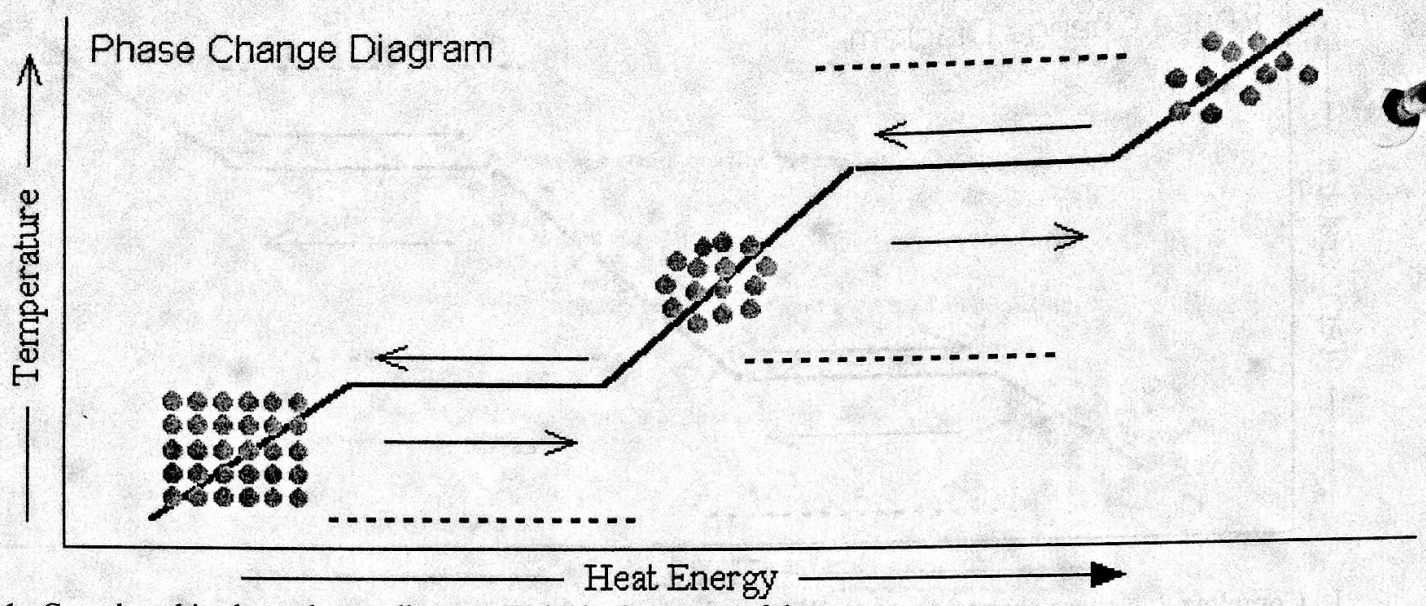


This diagram shows an experiment with equal amounts of two different substances in identical beakers and hot plates. Both hot plates are turned to the same setting.

Substance X has a heat of fusion of 400 Joules/gram.
Substance Y has a heat of fusion of 200 Joules/gram.

a. Which substance will be completely melted first?_____
b. If substance Y takes 20 minutes to melt, how long will substance X take to melt? _____
c. To melt 2 grams of substance X would require _____ Joules
d. When 6 grams of liquid substance Y freezes how much energy is released? _____
e. When the energy is released is this an endothermic or exothermic process? _____

Phase Changes/Density Quiz A Name_____

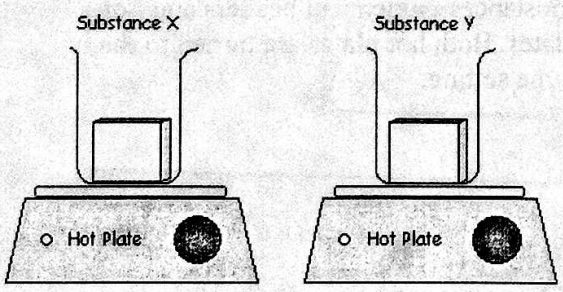


1. Complete this phase change diagram. Write in the names of the:
   (3) phases
   (4) phase change processes (the small arrows)
   Heat of Fusion
   Heat of Vaporization
   Color the line GREEN where the potential energy is changing
   Color the line PURPLE where the kinetic energy is changing

2. T / F You can change both the temperature and state of a material at the same time.

The little dots represent atoms or molecules of the substance. There are nine responses to write!

3.



This diagram shows an experiment with equal amounts of two different substances in identical beakers and hot plates. Both hot plates are turned to the same setting.

Substance X has a latent heat of fusion of 400 Joules/gram.
Substance Y has a latent heat of fusion of 200 Joules/gram.

a. Which substance will be completely melted first?_____
b. If substance Y takes 15 minutes to melt, how long will substance X take to melt? _____
c. To melt 3 grams of substance X would require _____ Joules
d. When 7 grams of liquid substance Y freezes how much energy is released? _____
e. When the energy is taken in from the surroundings is this an endothermic or exothermic process?